

Montana Driver Education and Training

Strategies for Rural Driving



Photograph courtesy of the AAA Foundation



Standards and Benchmarks

1. Laws and Highway System

- a. know the laws outlined in the Montana Driver's manual
- b. understand the laws outlined in the Montana Driver's manual
- c. consistently demonstrate knowledge and understanding by responsible adherence to highway transportation system traffic laws and control devices

2. Responsibility

- b. demonstrate the ability to make appropriate decisions while operating a motor vehicle
- c. consistently display respect for other users of the highway transportation system
- d. develop habits and attitudes with regard to responsible driving

3. Visual Skills

- a. know proper visual skills for operating a motor vehicle
- b. communicate and explain proper visual skills for operating a motor vehicle
- c. demonstrate the use of proper visual skills for operating a motor vehicle
- d. develop habits and attitudes with regard to proper visual skills

4. Vehicle Control

- a. demonstrate smooth, safe and efficient operation of a motor vehicle
- b. develop habits and attitudes relative to safe, efficient and smooth vehicle operation.



Standards and Benchmarks

5. Communication

- a. consistently communicate their driving intentions (i.e., use of lights, vehicle and personal signals)
- b. adjust their driver behavior based on observation of highway transportation system and other users
- c. adjust communication (i.e., use of lights, vehicle and personal signals) based on observation of highway transportation system and other users
- d. develop habits and attitudes relative to effective communication

6. Risk Management

- a. understand driver risk-management principles
- b. demonstrate driver risk-management strategies
- c. develop driver risk-management habits and attitudes

7. Lifelong Learning

- a. understand past, present and future vehicle and roadway design, and driving cultures
- c. understand benefits of a lifelong learning approach to driving
- e. identify opportunities for lifelong education in driving

8. Driving Experience

- a. acquire at least the minimum number of BTW hours over at least the minimum number of days, as required by law, with a Montana approved driver education instructor
- b. be encouraged to acquire additional BTW driving experience with their parent or guardian's assistance in a variety of driving situations (i.e., night, adverse weather, gravel road, etc.).



Crash Statistics

- Montana roadways are 96 percent rural
- During 2004, 57 percent of all crashes in Montana occurred on rural roadways
- Montana has the nation's highest death rate on all roads

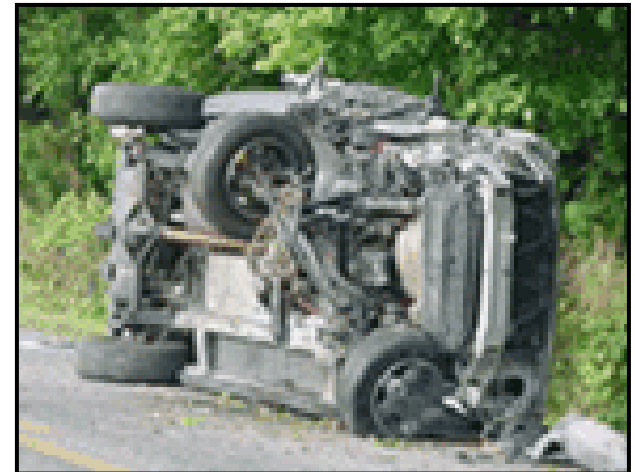


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Crash Statistics

The high percentage of rural roadways in Montana may account for the high fatality rate

- **Rural crashes are more likely to be head-on collisions**
- **Rural crashes involve more single vehicle rollovers, collisions with fixed objects and serious injuries**
- **It takes emergency medical services longer to reach rural crash scenes than urban crashes**





What might have caused the driver to lose control?

On this straight, well-maintained rural road, the driver lost control—all of the occupants were killed



Crash Statistics

A federal study found that there is a greater chance of severe vehicle damage in rural area crashes and of people being ejected from their cars



What could contribute to people being ejected from their cars?



Rural Road Characteristics

Many rural roads were designed when traffic speeds were slower and modern engineering was not available



Photography by Don Klosterman

- **Few traffic signs, sharp curves, and steep hills**
- **Less crowded and often have high speed limits**
- **May not have advisory speed limits posted beneath curve warning signs**
- **Fewer hazards than urban areas but higher speed limits allow hazards to be reached more quickly**



Rural Road Narrow Width

Narrow roads may have:

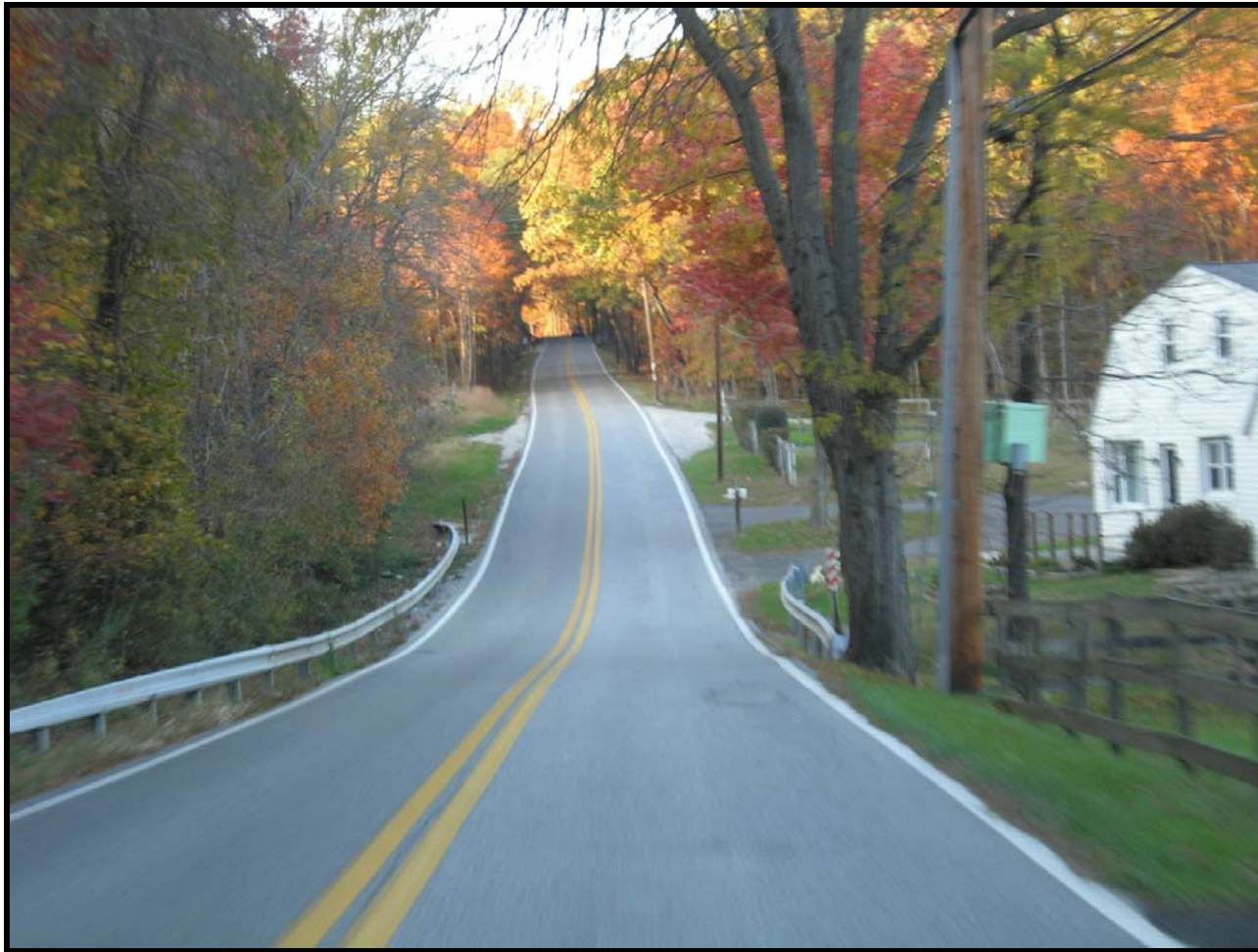
- **No shoulders or uneven surfaces**
- **Poor drainage**
- **Mailboxes, signs, and trees closer to the edge of the roadway**



Photo courtesy of www.tfhr.gov

**What driver behavior
could cause a driver to
hit this tree?**





How many potential hazards exist in this scene?



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How many potential hazards exist in this scene?



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Maximum Speed Limits

- The speed limit on Montana's state highways is 70 mph
- Local authorities set the speed limits on county roads – usually at 70 mph
- U.S. 93 has a speed limit of 65 mph
- Rural interstate highway speeds are up to 75 mph for passenger vehicles and 65 mph for large trucks

Speed
Limit
65

Speed
Limit
75



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Uneven Surface

- Roads can be broken pavement or gravel creating inconsistent traction
- “Washboard” surfaces can cause loss of traction
- Changing road surface can cause loss of control
- Soft and unmarked shoulders are especially hazardous at night



Signs and Markings on Rural Roads

- Traffic controls and roadway markings are inadequate
- Crash protection devices found on urban roads are lacking
- Signs may or may not be accurate or present



Rural Road Hazards

Rural Roads may:

- **Have more hazards**
- **Not be cleaned as often as city streets**
- **Contain roadway debris**
- **Have less snow removal**



The markings on this road are difficult to see.

Is this a common rural problem?





How can an oncoming driver
avoid this debris in the road?



Rural Road Characteristics

Mud, Gravel and Dirt

- Harvest season can create large chunks of mud in and along the side of the road
- Vehicle windows can accumulate dirt and gravel



Photo courtesy of ruralphotos.com



Line-of-Sight (LOS) Restrictions

- Hills and curves can restrict LOS
- Crops, trees and bushes can create LOS restrictions
- Fences close to the roadway edge can create large visual obstructions



Reduced Lighting on Rural Roads

- Low lighting or no lighting to help drivers see the roads
- Right side of lane may not have a painted white fog line
- Retro-reflective signs are more visible to the driver



Photo courtesy of Images of Beautiful Roads at:
<http://personal.udri.udayton.edu/klosterm/ahome.htm>

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Good Habits to Manage Time and Space

Use longer following distances when:

- Following a snowplow
 - Following farm equipment
 - Pulling a trailer
 - Driving on surfaces with less traction
 - Visibility is reduced
 - Other?
- Use your orderly visual search pattern
 - Search 20-30 seconds ahead ($\frac{1}{2}$ to $\frac{3}{4}$ mile)
 - Reduce speed when there is a line-of-sight or path-of-travel (LOS/POT) restriction



Two-Lane Rural Roads

- **Curves**
 - May be sharp and lack warning signs
 - May be narrow without shoulders
- **Hills**
 - Are usually not marked unless very steep
 - Some vehicles may have difficulty maintaining speed going uphill
- **Uphill vehicles have the right of way**



Two-Lane Rural Intersections

- Many are uncontrolled and hidden
- Identify intersections early by looking for:
 - Loose gravel in the roadway
 - Electrical, telephone, or utility lines
 - Reflectors marking driveways
 - Mailboxes – may be across the road from the driveway



Rural Two-Lane Intersections

- T-intersections – the driver on the main road has the right of way
- Y-intersections may be controlled by signs – know what the sign means before moving into the intersection



Photo courtesy of www.milebymile.com



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Rural Multi-Lane Roads

- Multi-lane roads have four or more lanes
- Intersections may or may not have traffic signs/signals
- Two-lane roads may cross a multi-lane road
- Multi-lane roads may be divided by a guardrail or a median strip



Photo courtesy of www.milebymile.com



Scenic Byways

- **Scenic byways are highways and local roads officially recognized as scenic or historical by the federal or state government**



Photo courtesy of www.milebymile.com



Three Types of Scenic Byways



Photo courtesy of www.milebymile.com

- **Scenic, Historical and Backcountry**
- **All are marked with brown signs**
- **Scenic and historical byways are usually two-lane paved roads**
- **Many byways have**
 - **Steep grades that are closed in winter**
 - **Narrow, windy roads**



Scenic Byways

- In 1999, a law was passed to create Montana's scenic/historic byways program
- The Beartooth Highway from eight miles south of Red Lodge to Colter Pass is designated a National Scenic Byway



Photo courtesy of <http://travelmontana.state.mt.us>





You are the driver of the oncoming white car behind the red pickup truck in front of you. When will it be safe to pass the pickup truck?



Passing on Two-Lane Rural Roads



Photo courtesy of www.milebymile.com

- **Passing on two-lane rural roads can be very risky because:**
 - Low traction
 - Low lighting
 - Narrow roads
 - High speeds



Passing on Two-Lane Rural Roads



Photo courtesy of www.milebymile.com



- **No-passing zones help improve safety**
 - **Double-yellow lines are painted in locations with visual limitations**
 - **Ignoring no-passing zones can risk the lives of your passengers and innocent occupants of the vehicle ahead that may not be able to see oncoming vehicles**

Deciding to Pass

- **Before passing, know the answer to these questions:**
 - **What is the road width**
 - **Are there shoulders?**
 - **Are there LOS/POT restrictions**
 - **How far away is the oncoming vehicle?**
 - **Is the oncoming driver driving within the speed limit? Is the vehicle turning left?**
 - **Are there hidden driveways or intersections?**





Photo courtesy of AAA Foundation

The driver of the vehicle ahead has moved to lane position 5

If you were following this vehicle, would you pass?

Why?

Why not?



Preparing to Pass on Two-Lane Rural Roads

- **Before passing know if you have a long, straight, open zone to complete the pass**
 - **Keep a following distance of at least three seconds**
 - **Search for vehicles slowing, turning or preparing to stop**
 - **Estimate passing distance needed, you may increase speed by 10 mph to pass another vehicle**



What do
these two
roads have in
common?



Passing on Multi-lane Rural Roads



- **Be prepared for heavier traffic**
 - **Search rear zone**
 - **Check traffic speed in the front zones**
 - **If a passing lane is ahead, wait to pass there**
- **Passing lanes are usually available on long grades**



Being Passed on Rural Roads

- **When being passed, drivers carry some responsibility to help the driver pass safely**
 - **Move to LP3 to increase the other driver's visibility and space cushion**
 - **Reduce speed to help them pass quickly**
 - **Adjust your following distance**
 - **Never speed up to prevent the other driver from passing—it's illegal and very risky**



Highway Hypnosis

- Highway hypnosis is when a driver goes into a dreamlike state, not remembering the last few seconds (or longer) of driving
- Driving at a constant speed on a road with little traffic can contribute to fatigue, boredom or getting accustomed to the speed



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Highway Hypnosis

- **Safety features to help prevent highway hypnosis include:**
 - **Rumble strips to alert drivers they are leaving their lane or entering an intersection**



Velocitation

- Occurs when a driver drives faster than intended because the speed “feels” slower than it actually is
 - Typically can occur when leaving a high-speed roadway to merge onto a slower speed roadway
 - The result may be exceeding the speed limit





Slow Moving Vehicles - Definition

- **Designed to travel no faster than 25 mph**
- **Must have a foot brake and turn signals**
- **Must display the “slow moving” emblem**
- **May travel on public roadways during daylight hours**
 - **Exception for emergency, snow removal equipment and farm equipment on non-interstate highways and equipped with flashing lights visible for 500 feet**





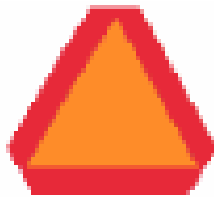
Photo courtesy of AAA Foundation

Identify the required equipment on this slow moving vehicle that permits it to be driven on public roads



Slow Moving Vehicles on Rural Roads

- **The variety of vehicles includes:**
 - **“Wide loads” carrying modular homes, trailers, heavy equipment**
 - **Farm equipment**
 - **Snowplows and de-icing trucks**
 - **Off-road vehicles such as ATVs and snowmobiles**





Slow Moving Vehicle Cautions

- **Slower vehicles can create problems:**
 - Traffic backing up resulting in rear-end collisions
 - Wide loads making it difficult to pass
 - Hauled equipment spilling debris
- **Montana Slow Moving Vehicle Law**
 - Any vehicle traveling so slowly that it delays three or more vehicles must turn off the road where safe and allow other vehicles to pass





Identify Slow Moving Vehicles Early

- **Maintain a safe following distance**
- **Do not pass unless a clear, open LOS is seen**
- **Approach with caution**
- **Be alert for equipment projecting out**
- **Reduce speed uphill until the slower vehicle crests the hill**



Photo courtesy of AAA Foundation



Night Driving

- Practice these good habits:
 - Headlights and taillights lit from sunset to sunrise
 - Dim headlights 1,000 feet before meeting and 500 feet before overtaking another vehicle
 - Keep the windshield clean both inside and out
 - Glance to the right edge when oncoming vehicles approach



Railroad Crossings

- There are nearly 252,000 highway-railroad grade crossings in the United States
 - Montana has 1,362 public crossings and
 - 1,083 private crossings





In the United States about every two hours a vehicle or pedestrian is struck by a train



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Rural Railroad Crossings

- Rural railroad crossings are less likely to have lights, bells, and whistles than urban crossings
- Many crossings may only have a crossbuck sign or no sign
- Treat these crossings with extreme caution and use the good habits (Module 7) for crossing railroad tracks
- At night it may be very difficult to see a train--search carefully for signs of a train, especially the headlight that is more visible



Animals

- Every year about 1,800-2,000 crashes with wild animals are reported in Montana
 - Most crashes go unreported
 - Deer are most active during early morning and evening
- The most dangerous time of year is during the mating season: November and December
- 90% of deer-vehicle crashes occur between dawn and dusk
- Large animals such as elk and deer can cause serious damage to vehicles and occupants



Photo courtesy of AAA Foundation



Animal Crossings

- Reduce speed in animal crossing areas
- If a herd is on the road, stop and let the herd clear the road
- Avoid high beam or flashing headlights – the animals could become confused
- Do not swerve – it's better to hit an animal than to crash head on into another vehicle
- Use controlled braking to slow down and stop
- Hold on to the steering wheel
- If a crash with an animal is inevitable, reduce impact when possible by making a glancing hit with controlled steering
- Do not attempt to render aid to the animal
- If the damage is \$750 or more, Montana law requires drivers to contact law enforcement





Photo courtesy of AAA Foundation

What actions might the driver have taken to avoid this collision?



Montana Open Range Law

- Open range means all un-enclosed lands outside of cities, villages and herd districts, upon which cattle by custom, license, lease, or permit, are grazed or permitted to roam
- Fences do not void the open range law
- The owner is not required to keep animals off the road and is not liable for any damages or injury
- Animals under controlled movement in a crossing area have the right of way





You are the
driver, who has
the right of
way?



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